To: "McInnis, Amanda" [Amanda.McInnis@hdrinc.com]
Cc: []
Bcc: []
From: CN=Tina Laidlaw/OU=MO/OU=R8/O=USEPA/C=US
Sent: Tue 6/26/2012 10:05:23 PM
Subject: Re: Clark's slides on algae production in the Clark Fork and Yellowstone Rivers

Amanda,

Thanks for sending these slides. I've been out on vacation (beach) and am just now getting back into Nutrient stuff and had a few questions.

Just so I'm clear, from these slides, it looks like the Clark Fork is more responsive (based on chl-a) to nitrogen reductions than TP reductions... If I'm reading the graphs correctly. while Kinsey Bridge shows a response based on both TP and TN. So, you'd use this analysis to argue for not going super low with TN on the Clark Fork. Is that what you're thinking?

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From: "McInnis, Amanda" <Amanda.McInnis@hdrinc.com>
To: Tina Laidlaw/MO/R8/USEPA/US@EPA
Date: 06/20/2012 01:45 PM
Subject: Clark's slides on algae production in the Clark Fork and Yellowstone Rivers

Tina—

You had asked me to send Clark's slides on the algae production changes with improvements in plant performance. I think the point that Dave was trying to make here is that based on river modeling we can see whether pushing a discharger to the next level of treatment affects algal production in a meaningful way. As you can see, its different for different rivers and for different nutrients--nitrogen and phosphorus are not always both limiting.

There are a number of possible ways we could use this information to inform our decisions. I kind of like the idea of using the Maine indicator-based approach within the variance—where we would look at the other indicators first to see if there truly is a problem in the water body (rather than just defining the nutrients themselves as the problem), if there is a problem, then we apply the charts and decide if a discharger should go lower—if there is an X% drop in algae for instance.

I also attached the Montana code for non-significant changes in water quality just as a reference point.

Amanda[attachment "3138_001.pdf" deleted by Tina Laidlaw/MO/R8/USEPA/US] [attachment "3140_001.pdf" deleted by Tina Laidlaw/MO/R8/USEPA/US]